



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,804	08/24/2001	Isaac Mayzlin	CARDIFF.053A	2168
20995 7590 05/14/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER LE, BRIAN Q	
			ART UNIT 2624	PAPER NUMBER
			NOTIFICATION DATE 05/14/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartec@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No. 09/938,804	Applicant(s) MAYZLIN, ISAAC	
	Examiner Brian Q. Le	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-14 and 36 is/are allowed.
- 6) ☒ Claim(s) 1,15-21 and 24-35 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 22-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/12/2007 has been entered.

Response to Amendment and Arguments

2. Applicant's arguments with regard to claims 1, 15, 19, 21, 24-27, and 30-35 have been fully considered, but are not considered persuasive because of the following reasons: Regarding independent claims 1, 15, 19, 25-27, and 35, the Applicant argues (pages 11-12 of the Remarks) that neither Huttenlocher U.S. Patent No. 6,249,604 nor Zhou et al. U.S. Patent No. 5,892,843 teach a concept of gap in a character stroke. The Examiner respectfully disagrees. Zhou clearly teaches this limitation at FIG. 4, "number of holes"; FIG. 7; column 5, lines 50-67 and column 6, lines 20-30. If the Applicant believes that this is not how one skill in the art should interpret the teaching of Zhou as a gap in a character; perhaps, Applicant then must define a definition of 'gap in a character' in the claim (as supported in the original disclosure) to avoid different interpretation. To further assist the Applicant with the guidance with claim language interpretations so that the Applicant can add further/more detailed limitations from the specification to the claims to overcome the prior arts, the Examiner is presenting MPEP, section 2111, Claim Interpretation; Broadest Reasonable Interpretation as follow: "The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a

Art Unit: 2624

claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.). See also *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification.")").

The Applicant also argues (page 12 of the Remarks) regarding the combination of Huttenlocher and Zhou. First, as discussed in previous Office Actions, Huttenlocher teaches the concept of locating gaps (column 15, lines 45-67) and eliminating gaps (column 15, lines 29-35 and column 16, lines 53-65). Huttenlocher does not explicitly teach a concept of identify a gap in a character stroke. Zhou teaches this concept, identification of a gap in a character stroke. Therefore, it would have been obvious for one skilled in the art to modify Huttenlocher not only to be able to identify gaps between strokes but also able to identify gaps in a character stroke so that gaps can be eliminate as disclosed by Huttenlocher. Clearly, this would improve processing of recognition by further aid in discriminating between text and photographic regions (column 7, lines 18-46) and therefore, it would have been obvious to one of ordinary skill in the art to modify Huttenlocher according to Zhou.

The Examiner believes that all the arguments of the Applicant have been properly addressed and explained. Thus, the rejections of all of the claims are maintained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 15, 19, 24-27 and 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Huttenlocher U.S. Patent No. 6,249,604 and Zhou et al. U.S. Patent No. 5,892,843.

Regarding claim 1, Huttenlocher teaches a method for improving optical recognition of text (column 6, lines 18-20 and 27-30) in an electronic bitmap including non-white pixels and white pixels (column 9, lines 25-32) through preprocessing of the bitmap (column 7, lines 25-29) in a computer (column 9, lines 10-20), the computer comprising:

- a) receiving the bit map (FIG. 1A, input and column 9, line 45);
- b) locating one or more bytes (binary/pixels processing) having no non-white pixels in the received bitmap, wherein the locating identifies gaps of character strokes (column 15, lines 45-67);
- c) inserting bytes (binary/pixels processing) having non-white pixels into a series of bytes having no non-white pixels such that at least a portion of the identified gaps is eliminated (column 15, lines 29-35 and column 16, lines 53-65); and

d) optically recognizing the bitmap for a predefined class of text characters (column 18, lines 46-57).

However, Huttenlocher does not explicitly teach the identification of gaps in a character stroke. Zhou teaches a method of processing optical recognition of text (column 2, lines 4-8) in bitmap (FIG. 1, element 22) wherein identifies a gap in a character stroke (FIG. 4, "number of holes"; FIG. 7; column 5, lines 50-67 and column 6, lines 20-30). Modifying Huttenlocher's method of processing optical recognition of text according to Zhou would be able to identify gaps within the pattern of character strokes so that gaps in a character stroke can also be eliminate as disclosed by Huttenlocher. This would improve the processing of recognition by further aid in discriminating between text and photographic regions (column 7, lines 18-46) and therefore, it would have been obvious to one of the ordinary skill in the art to modify Huttenlocher according to Zhou.

For claim 15, Huttenlocher teaches a system (column 9, lines 10-20) to improve optical recognition of text (column 6, lines 18-20) in an electronic bitmap including non-pixels and white pixels (column 9, lines 25-32), the system comprising:

A computer environment (column 9, lines 10-20); and

A software program operating the computer environment (column 9, lines 10-20),
comprising:

A receive module configured to receive the bitmap (FIG. 1A, input and column 9, line 45),

An enhancement module configured to enhance the bitmap obtained from the receive module, wherein the enhancement module performs a contiguity analysis and selective

insertion of pixels based on the contiguity analysis, wherein the contiguity analysis identifies gaps in character strokes (column 15, lines 29-35 and column 16, lines 53-65), and

A recognition module configured to recognize the text in the enhanced bitmap (column 18, lines 46-57).

Referring to claim 19, please refer back to claims 1 and 15 for the teachings and explanations.

Regarding claim 21, Huttenlocher teaches the method wherein the contiguity analysis identifies a vertical gap in image data between two image objects, each image object being located at the same horizontal position on the bitmap as the gap (FIG. 5B)

Regarding claim 24, Huttenlocher teaches the method wherein the bitmap, arranged as columns and rows, is processed along each column in succession (FIG. 23).

For claim 25, please refer back to claims 1 and 15 for the teachings and explanations. Also, Huttenlocher teaches a computer-readable medium containing instructions for controlling a computer environment (commands entered at user interface) (column 9, lines 10-24).

For claim 26, please refer back to claim 25 for the teachings and explanations.

Regarding claims 27, please refer back to claims 1, 15, 19, 25 and 26 for the teachings and explanations.

Referring to claim 30, Huttenlocher teaches the method wherein inserting bytes having non-white pixels into a series of bytes having no non-white pixels comprises eliminating at least a portion of the identified gaps in character strokes (add black pixels) (column 16, line 55; FIG. 13A, element 304 and element 314; FIG. 13B, element 316).

Art Unit: 2624

For claim 31, Huttenlocher discloses the method wherein the received bitmap comprises a plurality of bytes and wherein the locating of bytes having no non-white pixels comprises comparing vertically adjacent ones of the bytes of the bitmap (FIG. 15A - FIG.15B).

As to claim 32, Huttenlocher teaches a method wherein the gaps in character strokes are vertical gaps (FIG. 15A - FIG.15B).

For claim 33, Huttenlocher discloses the system wherein the pixels that are selectively inserted are non-white pixels (add black pixels) (column 16, line 55; FIG. 13A, element 304 and element 314; FIG. 13B, element 316).

For claim 34, please refer back to claim 32 for the teachings and explanations.

For claim 35, please refer back to claim 1 for the teachings and explanations.

5. Claims 16-18, 20, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Huttenlocher U.S. Patent No. 6,249,604 and Zhou et al. U.S. Patent No. 5,892,843 as applied to claim 15 above, and further in view of Lopresti U.S. Patent No. 5,748,807.

For claim 16, Huttenlocher teaches a process wherein the enhancement module utilizing binary processing. Huttenlocher does not explicitly teaches the enhancement module performs one of a byte length process, a bitwise process or a multi-bit process. Lopresti teaches an improving optical character recognition (column 1, lines 8-13) wherein the enhancement module (8-bit check-sum) performs one of a byte length process, a bitwise process or a multi-bit process (8-bit check-sum/byte length process) (column 9, lines 21-40). Modifying Huttenlocher's method of improving optical recognition of text according to Lopresti would able to multi-bit/byte length processing to further detect and correct error of character recognition. This would

Art Unit: 2624

improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Huttenlocher according to Lopresti.

Regarding claim 17, Huttenlocher teaches the system wherein the computer environment is connected to an optical scanner (OCR method and scanner to perform OCR) (column 7, lines 20-22 and column 9, line 15).

Referring to claim 18, Huttenlocher discloses the system wherein the computer environment is connected to a network and receives the bitmap via the network (the connection of all apparatuses together) (column 9, lines 10-24).

For claim 20, please refer back to claim 16 for the teachings and explanations.

For claim 28, please refer back to claim 16 for the teachings and explanations.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huttenlocher et al. U.S. Patent No. 6,249,604.

Regarding claim 29, Huttenlocher teaches a concept of each bit is displayed as a unique pixel (each pixel corresponding to a unique radian value) (FIG. 4D). The Examiner takes Official Notice that each byte in binary data comprises eight bits. It would have been obvious for one skilled in the art to continue using this binary system to process binary data since it is a well-known system in binary data analysis.

Allowable Subject Matter

7. Claims 2-4, and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 5-14 and 36 allowed.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q. Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian Le
May 8, 2007